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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Masanari Shirai

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EXAMINER

QIN, YIXING

ART UNIT

PAPER NUMBER

2625

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/875,015

Applicant(s)

SHIRAI, MASANARI

Examiner

Yixing Qin

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8 and 10-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8 and 10-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2006 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8 and 10-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The last limitation of claim 8 states "wherein the two peripheral surface areas of said image bearing member against which said two second regulating members abut **are inside** the two peripheral surface areas of said image bearing member against which said two first regulating members abut in a longitudinal direction of said image bearing member." It is unclear from the limitation what the term "inside" indicates. An area A even partial contained within another area B can be interpreted as area A is inside B. Also, an area A closer towards the center of an object, than an area B can also be interpreted as being inside.

It is also unclear just how large the various peripheral surface areas are. They can be interpreted to be as large as the entire drum (item 1 of the applicant's specification – page 5, lines 14-16 states that a latent image can be formed on the peripheral area of the photosensitive member 1, which means that the entire drum 1 can read as a peripheral surface area). This would indicate that every regulating member would be touching a part of the same peripheral area (the entire drum), which is in direct contradiction with the fifth limitation that the two sets of regulating members touch different peripheral areas. Even arbitrarily chosen peripheral areas close to the

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regulating members can still overlap, so it is arguable in this situation whether the regulating members are actually touching different peripheral areas.

For the rejection below, the Examiner will take the stance that the two sets of spacers in the new reference, Tanaka (U.S. 5,471,286), are positioned in different peripheral areas since one set is positioned north of the other set of spacers. The peripheral area that the first set of spacers abuts is interpreted to be inside the peripheral area of the second set of spacers abuts, even though these areas are two different arbitrary areas. For example, the first peripheral areas are taken to be areas around the photosensitive drum (Fig. 1, item 1) that touches the first set of spacers when they are rotated about each other. The second peripheral area is taken to be an area that is arbitrarily larger than the first peripheral area, but still contains the first peripheral area – i.e. they are different areas, but the first two peripheral areas are still “inside” the second peripheral areas.

Please see the rejection below for more details.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

I. Claims 8, 10-13 rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka (U.S. Patent No. 5,471,286).

Regarding claim 8, Tanaka discloses an image forming apparatus comprising:
a rotatable image bearing member on which an electrostatic image is to be formed; (Fig. 1, item 1)

a first developer carrying member, which carries and conveys a developer, (Fig. 1, items 2) and develops the electrostatic image on said image bearing member by a developing bias being applied to said first developer carrying member; (Fig. 1 and column 1, lines 18-27)

a second developer carrying member, which is disposed downstream of said first developer carrying member in a rotating direction of said image bearing member (Fig. 1, items 5) carries and conveys a developer and develops again the electrostatic image developed by said first developer carrying member by a developing bias being applied to said second developer carrying member; (column 1, lines 35-44)

pressing means for pressing said first developer carrying member and said second developer carrying member toward said image bearing member, (Fig. 1, item 13, column 1, lines 62-66)

two first regulating members, which are disposed on both sides in a longitudinal direction of said first developer carrying member, (Fig 3, items 3 and 4) respectively and which regulate a gap between said image bearing member and said first developer

carrying member with said two first regulating members abutting against said image bearing member; (Fig. 3 and column 2, lines 53-67)

two second regulating members, which are disposed on both sides in a longitudinal direction of said second developer carrying member, respectively, abut against two peripheral surface areas of said image bearing member different from the two peripheral surface areas of said image bearing member against which said two first regulating members abut (Fig 3, items 6 and 7) and which regulate a gap between said image bearing member and said second developer carrying member; (Fig. 3 and column 2, lines 53-67) and

wherein the two peripheral surface areas of said image bearing member against which said two second regulating members abut are inside the two peripheral surface areas of said image bearing member against which said two first regulating members abut in a longitudinal direction of said image bearing member. (Fig. 3 – the first peripheral areas are taken to be areas around the photosensitive drum – Fig. 1, item 1 – that touches the first set of spacers when they are rotated about each other. The second peripheral area is taken to be an area that is arbitrarily larger than the first peripheral area, but still contains the first peripheral area – i.e. they are different areas, but the first two peripheral areas are still “inside” the second peripheral areas) .

Regarding claim 10, Tanaka discloses a developer container, which contains a developer, and which has said first developer carrying member disposed in an opening portion opposite to said image bearing member, (Fig. 3, item 12)

wherein said second developer carrying member is disposed in said opening portion with a gap between said first developer carrying member and said second developer carrying member (Fig. 3, items 2 and 5 – there is a gap between the two developers), and carries the developer with a layer thickness which is restricted by the gap. (Fig. 3, gap between items 2 and 3(4) or items 5 and 6(7))

Regarding claim 11, Tanaka discloses wherein a rotation direction of said first developer carrying member is the same as a rotation direction of said second developer carrying member. (Column 1, lines 28-34).

Regarding claim 12, Tanaka discloses wherein in the first developing area, a movement direction of a surface of said first developer carrying member is the same as the movement direction of the surface of said image bearing member, and in the second developing area, a movement direction of a surface of said second developer carrying member is the same as the movement direction of the surface of said image bearing member. (Fig. 1, column 1, lines 18-30. The photosensitive drum 1 rotates clockwise and the rollers 2 and 5 rotate counterclockwise. At the point of contact both the drum 1 and the rollers 2 and 5 rotate in a downward direction.)

Regarding claim 13, Tanaka discloses wherein in the first developing area, a peripheral speed of said first developer carrying member is higher than a peripheral speed of said image bearing member, and

wherein in the second developing area, a peripheral speed of said second developer carrying member is higher than the peripheral speed of said image bearing member. (Tanaka discloses in Fig.1-3 that the rollers 2 and 5 are relatively smaller as compared to the photosensitive drum 1. Common mechanics shows that if two wheels were to come in contact with each other, the smaller wheel would move faster than the larger wheel because it needs more rotations to cover the same amount of distance moved because of its smaller circumference).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yixing Qin whose telephone number is (571)272-7381. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Lamb can be reached on (571)272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



YQ



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